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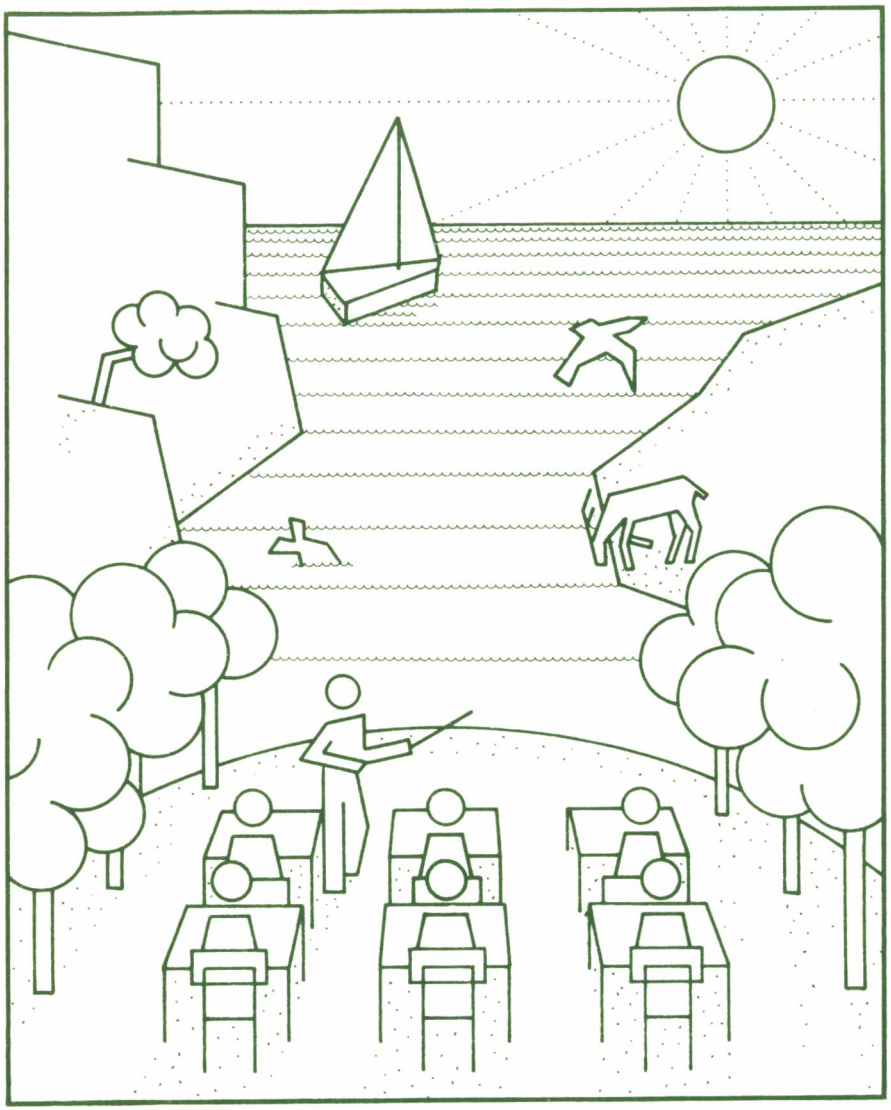
United States
Department of
Agriculture

Forest
Service

FS-353

Reference Guide for Environmental Education and the Conservation of Natural Resources



Conservation is a word that means many things to people. We think of conservation as meaning the *wise use* of such things as our natural resources. But it is more than that—it is a *way of thinking* about those resources. It is a way of life that is concerned with our daily needs.

The Forest Service of the U.S. Department of Agriculture is dedicated to the principles of multiple-use management of the Nation's forest resources for sustained yields of water, forage, wildlife, wood, and recreation. Through management of the National Forests and National Grasslands, cooperation with the States and private forest owners, and forestry research, it strives—as directed by Congress—to provide increasingly greater service to a growing Nation.

Increasing public concern about environmental matters, along with steadily increasing demands on all forest resources, has stimulated public interest in securing more detailed information about forest land management and more involvement in forest-related matters. Many schools, at all levels, have integrated environmental/conservation education into the basic curriculum. Others offer it as a special study area.

It is important to assist these schools as well as each individual, whether urbanite or ruralist, to obtain a fuller understanding of the environment, the problems that confront it, the interrelationship between the community and surrounding land, and the opportunities for the individual to be effective in working toward the solution of environmental problems.

To respond to this interest, the Forest Service makes available a variety of printed materials that contribute to better public understanding of natural resource issues and environmental management.

The following publications are selected because of their focus on natural resources or career opportunities in resource-related fields. Individuals who work with groups on natural resource projects or activities might find these publications helpful as teaching aids, reference materials, or reading supplements.

Categories include natural resources, Forest Service career information, educational aids, and outdoor recreation tips.

Read through the description of each publication to determine the appropriateness of its content and design for the intended target audience.

In addition to a brief outline of the subject matter, a key on page 10 illustrates other publication characteristics that may assist in selection for educational purposes. These include:

Pages or format: Shows the number of pages or the format.
P. Poster format rather than booklet.
K. Kit containing a variety of materials.

Level of information detail:
G. General: Explains the subject at an introductory level and provides definitions.
T. Technical: Provides extensive detail and may provide definitions for terminology used.

Readability: Indicates a suggested target age group based on the vocabulary used. This is provided as a guide to educators seeking supplemental student reading. It is felt, however, that the content in all publications can be adapted by the educator to most age groups. Therefore, all are felt to be useful references.

Illustrations: Provides a guide to the quantity and style of illustrations used.

P. Pictures.	M. Many.	L. Limited.
G. Graphs or charts.	A. Adequate.	N. None.

Availability: Indicates whether the publication is stocked by the Forest Service, the Superintendent of Documents, or both.
S. For sale only (no free copies available).
F. Free (up to five copies available free).
FS. Free and sale (one free copy available; charge for more than one copy).

Focus: Shows emphasis of information.
R. Rural. U. Urban.

Single copies of publications marked F or FS may be obtained free by writing to the Forest Service, U.S. Department of Agriculture, P.O. Box 2417, Washington, D.C. 20013, or to the Regional Forester for your State. (See the following addresses. The Regional Forester may have other localized material of interest to you.) Order forms are on page 11. Please do not send money to the Forest Service or ask pupils to order materials or publications.

For more than one copy of publications marked FS or for one or more copies of publications marked S, send your request directly to the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. (Stamps are not accepted.)

Regional Foresters:

Region 1, Federal Building, Missoula, MT 59807 (for Montana, northern Idaho, North Dakota, and northwestern South Dakota).

Region 2, 11177 W. 8th Ave., P.O. Box 25127, Lakewood, CO 80225 (for Colorado, Kansas, Nebraska, South Dakota, and eastern Wyoming).

Region 3, Federal Building, 517 Gold Ave., S.W., Albuquerque, NM 87102 (for Arizona and New Mexico).

Region 4, Federal Building, 324 25th St., Ogden, UT 84401 (for Utah, southern Idaho, western Wyoming, and Nevada).

Region 5, 630 Sansome St., San Francisco, CA 94111 (for California and Hawaii).

Region 6, 319 S.W. Pine St., P.O. Box 3623, Portland, OR 97208 (for Washington and Oregon).

Region 8, 1720 Peachtree Rd., N.W., Atlanta, GA 30309 (for Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virgin Islands, and Virginia).

Region 9, 633 W. Wisconsin Ave., Milwaukee, WI 53203 (for Connecticut, Delaware, Illinois, Iowa, Indiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin).

Region 10, Federal Office Building, P.O. Box 1628, Juneau, AK 99802 (for Alaska).

Latest revision: Shows the year the material was last revised. This may indicate the accuracy of the text depending on the subject matter or target audience needs.

Natural Resources

Cavity-Nesting Birds of North American Forests
Agric. Handbook 511

Habitat, cavity requirements, and foods are described for 85 species of birds that nest in cavities in dead or decadent trees. Intensive removal of such trees would disastrously affect breeding habitat for many of these birds that help control destructive forest insects. Birds are illustrated in color; distributions are mapped.
112 G 12 MPG S UR 77 *(See page 10 for key.)*

Discover Birding in the National Forest
PA-1216

The opportunities for birdwatching in the National Forests are described. The basic equipment and objectives of birding are reviewed along with sources of additional birding information.
7 G 12 APG FS UR 78

Trees

A Tree Hurts Too
AIB-396

This booklet outlines what usually happens as decay develops in a living tree. The drawings are designed to give an accurate general presentation of the decay process by focusing only on the major

portions of an extremely complex process that involves the interactions among microorganisms, environmental factors, and the tree. The better we understand these processes the better we can prevent and control decay—the major cause of damage to all species of trees throughout the world.
28 G 12 MCP S UR 76

How Trees Help Clean the Air
AIB-412

This booklet provides a general introduction to the major air pollutants and their sources. A descriptive review is given of parts of trees that react to pollutants. The importance of trees as indicators and filters to air pollution is discussed. A good background of air pollution characteristics is provided.
10 G 16 MP S UR 77

Trees for Polluted Air
MP-1230

The effect on trees and the source of air pollution are explained. Over 100 common tree species are included in charts that indicate the level of susceptibility to air pollution.
12 G 16 MG FS UR 73

Silviculture Is Growing Trees
AIB-398

This booklet is concerned with the principles of silviculture, rather than specific applications. The reader is exposed to common silvicultural terminology and a general explanation of six silvicultural treatments.
11 G 16 AP S R 76

People, Cities, and Trees
PA-958

This publication introduces the application of Forest Service research to urban needs. The use of forest products for urban greenbelts, noise abatement, water purity, housing, and recreation is discussed at an introductory level. However, some technical terminology is not defined.
9 T 16 AP F U 74

Making Paper From Trees
FS-2

A review of the international history of paper-making and the types of woods used in America is presented. Terms associated with common paper products are defined. A description of the general pulping process is provided, but little background information is made available.
9 T 16 LP FS UR 77

Your Tree's Trouble May Be You
AIB-372

This publication provides information on the wise use and care of trees. Typical people-caused tree injuries are discussed with preventive methods recommended.
21 G 12 MPG S UR 74

Rx for Wounded Trees
AIB-387

This booklet offers guidelines on how to care for trees to keep them healthy and to protect them from wounds. It also prescribes ways to prevent, recognize, and minimize damage by decay that most often sets in after tree wounding.
37 G 12 MPG FS UR 76

How a Tree Grows
FS-8

This poster illustrates cross sections of the trunk, root, and leaf of a tree. Explanatory paragraphs are included.
P G 12 MPG FS UR 78

What We Get From Trees
FS-279

This poster diagrams the variety of tree products in relation to their part in the makeup of a tree.
P G 12 APG FS UR 78

Forestry Fact Sheet
FS-40

On one side, this sheet defines the meaning of a forest, outlining its many uses. The general rationale for wise use of the forest is included. The other side displays Joyce Kilmer's "Trees."
P G 12 LP F UR 77

Highlights in the History of Forest Conservation
AIB-83

In response to Bicentennial-generated interest, this booklet provides a comprehensive historical overview of forest conservation. Each chapter chronologically discusses major events, philosophies, and personalities that had an impact on the conservation issue.
56 T 16 AP FS UR 76

What We Get From Forest Land
FS-47

This poster illustrates the products available through utilization of the major forest land natural resources: trees, wildlife, water, and forage. Several paragraphs review the amount and use of different types of forest land.
P G 12 AP FS UR 74

Careers With the USDA Forest Service

Forestry Schools in the U.S.
FS-9

This publication lists all the colleges and universities that provide a forestry curriculum. Brief descriptions of available degrees and of some of the program requirements are included for each school.
32 G 12 N FS UR 75

What the Forest Service Does
FS-20

A detailed description of the responsibilities, management programs, support services, research, and cooperative activities with State and private forest owners is included. Legislation important to past and future Forest Service programs is discussed.
31 T 16 LPG F UR 75

Forest Service Career Guide
MP-1282

Specific information on various career opportunities in the Forest Service is provided. The education needed to be competitive for the careers described is indicated under qualification requirements. General information is available on application procedures.
16 T 16 AP F UR 78

Career Profiles
FS-308

This publication explains career possibilities in natural resource management fields and provides a list of other sources of information on these occupations.
15 G 12 MP F UR 79

Temporary Employment With the Forest Service
FS-323

This booklet describes the various opportunities for temporary employment with the Forest Service and offers instructions for applying.
15 G 18 LP F UR 78

Engineers: Civil, Electrical, Mechanical—Consider a Career in the Forest Service
PA-1244

This folder describes the many career activities of engineers in the Forest Service, briefly describes entrance qualifications, and lists offices where more information is available.
16 G 18 MP S UR 79

Field Offices of the Forest Service
FS-13

Geographic distribution is shown for the National Forest System, Research Headquarters, and State and Private Forestry Areas. Both a map and office mailing addresses are included.
4 G 12 AP F UR 78

Education

Understanding the Game of the Environment
AIB-426

This book is a basic text on ecology designed for the high school and conservation youth group audience. It covers such topics as the identification of environmental elements; energy, material, and biogeochemical cycles; ecological succession; and the effects of natural and contrived occurrences on environmental balance. The material was tested in classrooms for 2 years prior to printing.
174 G 14 MPG FS 79

Suggestions for Incorporating Forestry Into the School Curriculum
FS-62

This publication recommends natural resource-related topics that can be interdisciplinary in content. Each school level (elementary, jr. high, and secondary) receives an individualized list of topics appropriate to that age group.
2 G 16 LP F UR 77

Help for Environmental Programs
PA-979

Helpful hints and references are given for environmental-conservation education programs. Address lists include typical local, State, Federal, and special interest organizations that are useful resources.
10 G 12 AP F UR 74

Developing the Self-Guiding Trail in the National Forests
MP-968

A summary is given detailing the basic considerations that must be taken into account when planning self-guiding trails. Constructing, maintaining, and improving self-guiding trails are covered. Although primarily designed for interpretive planners, this booklet has valuable tips for anyone involved with outdoor classrooms.
18 T 16 AP F UR 74

Lesson Plans—Activities

Investigating Your Community Environment
FS-333

This publication on a series of community investigations is designed to help readers become more aware of their communities, understand why certain things affecting the quality of life exist, and plan how each can work individually to improve that quality of life. The investigation format is designed for self-discovery and does not require the presence of a leader or facilitator.
8 G 12 AP F UR 77

Activities for Learning About Conservation of Forest Resources
PA-1214

A variety of simple, practical, and interesting classroom and field projects are described. The key concept and basic directions accompany each lesson. A materials address list is included.
29 G 12 MP FS UR 78

Investigating Your Environment
FS-349

This educational kit is designed to assist group leaders in environmental investigative activities. Guidesheets focus on leading problem-solving activities and designing environmental investigations. Lesson plans include directions and suggested discussion questions on the following investigations: soil, water, forest, animal habitats, and land-use simulation games. A training workshop is offered by the Forest Service to assist educators in using this material effectively. Contact your Regional Forest Service office for further workshop information.
K G 12 LP F UR 80

Woodsy Owl Environmental Education Teacher's Kit
(No number)

This kit contains a booklet of activities along with a selection of classroom aids including a poster of Woodsy. The activity booklet explains the learn-by-doing experience while giving both activity directions and related information for the user.
K G 16 MP F UR 79

Woodsy Owl Recreational Tips
FS-313-318

A collection of recreational tips covers planning, safety, and etiquette for a variety of outdoor activities. Each card deals with a separate recreational activity.
2 G 12 AP F R 76

It is recommended that you indicate your activity interest when ordering, because new tips may be available, even though not listed here. Those presently available are:

Woodsy Owl on: Camping, FS-318
Hiking & Backpacking, FS-313
Fishing, FS-317
4-Wheeling and Trail Biking, FS-330

Building Your Safe Campfire
PA-1017

In a simple, illustrated text, the basic steps in building a safe campfire are reviewed. This reminder is designed to assist youth leaders and young people.
15 G 12 MP S UR 76

Recreation on Forested Lands

The Forest Service Roles in Outdoor Recreation
PA-1205

This publication defines the many roles of the Forest Service in providing recreation to the public. It also offers discussions of recreation management policy and a comparison of Forest Service roles and those of other land management agencies.
13 T 12 APG F UR 78

National Forest Vacations
PA-1037

This publication describes many opportunities for vacations on the National Forests and offers an extensive list of specific activities on each forest, access routes, and locations of Forest Service offices.
55 G 12 APG FS UR 79

Winter Recreation Safety Guide
PA-1140

This publication provides an overview of winter safety for less experienced people and serves as a reminder to the more experienced. The common hazards involved in winter recreation and some of the precautions necessary for safe recreation are discussed. This booklet covers a wide variety of practical information.

Publication Characteristics Key

This publication supersedes "Materials To Help Teach Forest Conservation," FS-28.

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